WE CLAIM:

1. A method of pacing opposing chambers of a heart with a pacing system, the pacing system comprising a first unipolar medical electrical lead having at least one first electrode configured for positioning in a first opposing chamber of the heart, a second unipolar medical electrical lead having at least one second electrode configured for positioning in a second opposing chamber of the heart, an implantable pulse generator operably connected to the first and second unipolar medical electrical leads, the implantable pulse generator further comprising an hermetically sealed housing capable of serving as a can electrode, and means for switching electrode configurations between the first electrode and the can electrode, between the second electrode and the can electrode, between the first electrode and the second electrode and between the second electrode and the first electrode, the method comprising:

determining a primary electrode configuration;

selecting a cathode from the first electrode, the second electrode and the can electrode based on the primary electrode configuration;

selecting an anode from the first electrode, the second electrode and the can electrode based on the primary electrode configuration; and

delivering a first pulse between the cathode and the anode.

2. The method of claim 1, further comprising:

determining a first threshold of the first opposing chamber; and

determining a second threshold of the second opposing chamber.

3. The method of claim 2, further comprising:

selecting the first electrode as the cathode if the first threshold is higher than the second threshold.

4. The method of claim 2, further comprising:

selecting the second electrode as the cathode if the second threshold is higher than the first threshold.

5. The method of claim 1, further comprising:

determining an alternate electrode configuration;

selecting an alternate cathode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration;

selecting an alternate anode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration; and

delivering a second pulse between the alternate cathode and the alternate anode.

6. The method of claim 5, further comprising:

re-selecting the cathode and the anode;

delivering a third pulse between the cathode and the anode;

re-selecting the alternate cathode and the alternate anode; and

delivering a fourth pulse between the alternate cathode and the alternate anode.

7. The method of claim 1, further comprising:

delivering the first pulse between the cathode and the anode so that the direction of the pulse occurs from the first opposing chamber to the second opposing chamber.

8. The method of claim 1, further comprising:

delivering the first pulse between the cathode and the anode so that the direction of the pulse occurs from the second opposing chamber to the first opposing chamber.

9. The method of claim 1, further comprising:

delivering the first pulse between the cathode and the anode in a first direction; and

delivering at least one subsequent pulse between the cathode and the anode in the first direction.

10. The method of claim 1, further comprising:

delivering the first pulse from the cathode; and

simultaneously delivering a second pulse from the anode.

11. A method of pacing opposing chambers of a heart with a pacing system, the pacing system comprising a first bipolar medical electrical lead having at least one first electrode configured for positioning in a first opposing chamber of the heart, a second bipolar medical electrical lead having at least one second electrode configured for positioning in a second opposing chamber of the heart, an implantable pulse generator operably connected to the first and second bipolar medical electrical leads, the implantable pulse generator further comprising an hermetically sealed housing capable of serving as a can

electrode, and means for switching electrode configurations between the first electrode and the can electrode, between the second electrode and the can electrode, between the first electrode and the second electrode and between the second electrode and the first electrode, the method comprising:

determining a primary electrode configuration;

selecting a cathode from the first electrode, the second electrode and the can electrode based on the primary electrode configuration;

selecting an anode from the first electrode, the second electrode and the can electrode based on the primary electrode configuration; and

delivering a first pulse between the cathode and the anode.

12. The method of claim 11, further comprising:

determining a first threshold of the first opposing chamber; and

determining a second threshold of the second opposing chamber.

13. The method of claim 11, further comprising:

selecting the first electrode as the cathode if the first threshold is higher than the second threshold.

14. The method of claim 12, further comprising:

selecting the second electrode as the cathode if the second threshold is higher than the first threshold.

15. The method of claim 11, further comprising:

determining an alternate electrode configuration;

selecting an alternate cathode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration;

selecting an alternate anode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration; and

delivering a second pulse between the alternate cathode and the alternate anode.

16. The method of claim 15, further comprising:

re-selecting the cathode and the anode;

delivering a third pulse between the cathode and the anode;

re-selecting the alternate cathode and the alternate anode; and

delivering a fourth pulse between the alternate cathode and the alternate anode.

17. The method of claim 11, further comprising:

delivering the first pulse between the cathode and the anode so that the direction of the pulse occurs from the first opposing chamber to the second opposing chamber.

18. The method of claim 11, further comprising:

delivering the first pulse between the cathode and the anode so that the direction of the pulse occurs from the second opposing chamber to the first opposing chamber.

19. The method of claim 11, further comprising:

delivering the first pulse between the cathode and the anode in a first direction; and

delivering at least one subsequent pulse between the cathode and the anode in the first direction.

20. The method of claim 11, further comprising:

delivering the first pulse from the cathode; and

simultaneously delivering a second pulse from the anode.

21. A method of pacing opposing chambers of a heart with a pacing system, the pacing system comprising a first unipolar medical electrical lead having at least one first electrode configured for positioning in a first opposing chamber of the heart, a second unipolar medical electrical lead having at least one second electrode configured for positioning in a second opposing chamber of the heart, an implantable pulse generator operably connected to the first and second unipolar medical electrical leads, the implantable pulse generator further comprising an hermetically sealed housing capable of serving as a can electrode, the method comprising:

determining a primary electrode configuration;

selecting a cathode from the first electrode, the second electrode and the can electrode based on the primary electrode configuration;

selecting an anode from the first electrode, the second electrode and the can electrode based on the primary electrode configuration; and

delivering a first pulse between the cathode and the anode.

22. The method of claim 21, further comprising:

determining a first threshold of the first opposing chamber; and

determining a second threshold of the second opposing chamber.

23. The method of claim 22, further comprising:

selecting the first electrode as the cathode if the first threshold is higher than the second threshold.

24. The method of claim 22, further comprising:

selecting the second electrode as the cathode if the second threshold is higher than the first threshold.

25. The method of claim 21, further comprising:

determining an alternate electrode configuration;

selecting an alternate cathode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration;

selecting an alternate anode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration; and

delivering a second pulse between the alternate cathode and the alternate anode.

26. The method of claim 25, further comprising:

re-selecting the cathode and the anode;

delivering a third pulse between the cathode and the anode;

re-selecting the alternate cathode and the alternate anode; and

delivering a fourth pulse between the alternate cathode and the alternate anode.

27. The method of claim 21, further comprising:

delivering the first pulse between the cathode and the anode so that the direction of the pulse occurs from the first opposing chamber to the second opposing chamber.

28. The method of claim 21, further comprising:

delivering the first pulse between the cathode and the anode so that the direction of the pulse occurs from the second opposing chamber to the first opposing chamber.

29. The method of claim 21, further comprising:

delivering the first pulse between the cathode and the anode in a first direction; and

delivering at least one subsequent pulse between the cathode and the anode in the first direction.

30. An implantable medical device, comprising:

an implantable pulse generator within a housing, the housing operatively adapted to serve as a can electrode;

a first unipolar medical electrical lead operably connected to the implantable pulse generator, the first unipolar medical electrical lead having at least one first electrode configured for positioning in a first opposing chamber of the heart;

a second unipolar medical electrical lead operably connected to the implantable pulse generator, the second unipolar medical electrical lead having at least one second electrode configured for positioning in a second opposing chamber of the heart,

selecting means for selecting at least one of the first electrode, the second electrode and the can electrode;

wherein a primary electrode configuration is determined and a cathode is selected with the selecting means, an anode is selected with the selecting means and a pulse is delivered between the cathode and the anode.

31. The device of claim 30 further comprising:

a memory operably connected to the processor.

32. An implantable medical system, comprising:

a pulse generator;

a first unipolar medical electrical lead operably connected to the pulse generator, the first unipolar medical electrical lead having at least one first electrode configured for positioning in a first opposing chamber of the heart;

a second unipolar medical electrical lead operably connected to the pulse generator, the second unipolar medical electrical lead having at least one second electrode configured for positioning in a second opposing chamber of the heart, and

selecting means for selecting at least one of the first electrode, the second electrode and the can electrode, wherein a primary electrode configuration is determined and a cathode is selected with the selecting means, an anode is selected with the selecting means and a pulse is delivered by the pulse generator between the cathode and the anode.

33. The system of claim 32, further comprising:

means for determining a first threshold of the first opposing chamber; and

means for determining a second threshold of the second opposing chamber.

34. The system of claim 33, further comprising:

means for selecting the first electrode as the cathode if the first threshold is higher than the second threshold.

35. The system of claim 33, further comprising:

means for selecting the second electrode as the cathode if the second threshold is higher than the first threshold.

36. The system of claim 32, further comprising:

means for determining an alternate electrode configuration;

means for selecting an alternate cathode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration;

means for selecting an alternate anode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration; and

means for delivering a second pulse between the alternate cathode and the alternate anode.

37. The system of claim 36, further comprising:

means for re-selecting the cathode and the anode;

means for delivering a third pulse between the cathode and the anode;

means for re-selecting the alternate cathode and the alternate anode; and

delivering a fourth pulse between the alternate cathode and the alternate anode.

38. The system of claim 32, further comprising:

means for delivering the first pulse between the cathode and the anode so that the direction of the pulse occurs from the first opposing chamber to the second opposing chamber.

39. The system of claim 32, further comprising:

means for delivering the first pulse between the cathode and the anode so that the direction of the pulse occurs from the second opposing chamber to the first opposing chamber.

40. The system of claim 32, further comprising:

means for delivering the first pulse between the cathode and the anode in a first direction; and

means for delivering at least one subsequent pulse between the cathode and the anode in the first direction.

41. A computer usable medium including a program for opposing chambers of a heart with a pacing system, the pacing system comprising a first unipolar medical electrical lead having at least one first electrode configured for positioning in a first opposing chamber of the heart, a second unipolar medical electrical lead having at least one second electrode configured for positioning in a second opposing chamber of the heart, an implantable pulse generator operably connected to the first and second unipolar medical electrical leads, the implantable pulse generator further comprising an hermetically sealed housing capable of serving as a can electrode, and means for switching electrode configurations between the first electrode and the can electrode, between the second electrode and the can electrode, between the first electrode and the second electrode and between the second electrode and the first electrode, the program comprising:

computer program code that determining a primary electrode configuration;

computer program code that selecting a cathode from the first electrode, the second electrode and the can electrode based on the primary electrode configuration;

computer program code that selecting an anode from the first electrode, the second electrode and the can electrode based on the primary electrode configuration; and

computer program code that delivering a first pulse between the cathode and the anode.

42. The program of claim 41, further comprising:

computer program code that determines a first threshold of the first opposing chamber; and

computer program code that determines a second threshold of the second opposing chamber.

43. The program of claim 42, further comprising:

computer program code that selects the first electrode as the cathode if the first threshold is higher than the second threshold.

44. The program of claim 42, further comprising:

computer program code that selects the second electrode as the cathode if the second threshold is higher than the first threshold.

45. The program of claim 41, further comprising:

computer program code that determines an alternate electrode configuration;

computer program code that selects an alternate cathode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration;

computer program code that selects an alternate anode from the first electrode, the second electrode and the can electrode based on the alternate electrode configuration; and

computer program code that delivers a second pulse between the alternate cathode and the alternate anode.

46. The program of claim 45, further comprising:

computer program code that re-selects the cathode and the anode;

computer program code that delivers a third pulse between the cathode and the anode;

computer program code that re-selects the alternate cathode and the alternate anode; and

computer program code that delivers a fourth pulse between the alternate cathode and the alternate anode.

47. The program of claim 41, further comprising:

computer program code that delivers the first pulse between the cathode and the anode so that the direction of the pulse occurs from the first opposing chamber to the second opposing chamber.

48. The program of claim 41, further comprising:

computer program code that delivers the first pulse between the cathode and the anode so that the direction of the pulse occurs from the second opposing chamber to the first opposing chamber.

49. The program of claim 41, further comprising:

computer program code that delivers the first pulse between the cathode and the anode in a first direction; and

computer program code that delivers at least one subsequent pulse between the cathode and the anode in the first direction.

50. The program of claim 41, further comprising:

computer program code that delivers the first pulse from the cathode; and computer program code that simultaneously delivering a second pulse from the anode.